199. **Hirundo daurica nipalensis** Hodgs. Hodgson's Red-rumped Swallow.

LENGTH : 6½ inches.

FIELD CHARACTERS : Sexes alike. Differs from the last-mentioned bird in having the rump a pale rufous and the striations on the lower plumage much coarser.

DISTRIBUTION : In summer found from 6,000 ft. to 9,000 ft. Distributed all along the Himalayas.

GENERAL HABITS : The vanguard of this swallow often arrives at their breeding stations at the end of January if the weather is fine ; if the weather changes these birds return to lower altitudes. They leave the Hills in September.

NIDIFICATION : Same as for *H. daurica erythropygia*.

[There is obviously some confusion in the breeding records. Surely it cannot be that both the races *erythropygia* and *nipalensis* breed in the same area !—EDS.]

(To be continued)

SOME BIRDS OF THE GANDAK-KOSI WATERSHED, INCLUDING THE PILGRIM TRAIL TO THE SACRED LAKE OF GOSAINKUND

BY

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Two mountain passes guard the road to Katmandu. The visitor who is fortunate enough to cross the second of these, known as the Chandragiri pass, on a clear day will see one of the finest mountain views in the world, one that will live long in his memory. Spread out at his feet, 2,500 feet below, is the fair vale of Katmandu, a green expanse of rice and other crops with the towers and gorgeous palaces of the town in the middle distance ; on the north this fertile basin is bounded by the forest-clad ridge of Sheopuri, whence the watershed of the Gandak and the Kosi—those two great tributaries of the Ganges that rise in Tibet and drain large areas of Nepal—leads the eye up to a dark and jagged curtain of naked rock that runs up to the snow peaks of the Nepal-Tibet boundary, the main crystalline axis of the Himalayas. From the highest point of the Chandragiri ridge, some four miles east of the pass, can be seen no less than six peaks of over 26,000 feet :—Daulagiri (partly concealed), Ananpurna Himal, Himalchuli, and Manaslu in the west ; Gosainthan due north ; Everest in the east.

A collection of mountain tarns known as Gosainkund, sacred to the worshippers of Vishnu, lies high up (at about 14,000 ft.) on the western side of the Gandak-Kosi watershed ; and every year in August, when the monsoon is in full force, large numbers of pilgrims undertake the arduous journey to these lonely lakes. From Katmandu the first 9 miles is by motor road to Sundari-jal (=Laughing-water, a name no doubt suggested by the stream that comes cascading down to the valley at this point), whence a rough track climbs steeply to the Sheopuri ridge ; from here the trail follows the Gandak-Kosi watershed to a point marked Thare Pati on the map at

an elevation of about 12,000 ft., and then turns off left to traverse the tremendous cirque of precipices at the head of the Tadi Kola, eventually climbing to a 15,000 ft. pass some 5 or 6 miles short of the lakes.

What ornithologist, sweltering perhaps in the dusty plains of India or the steamy teak forests of Burma, has not pored over the descriptions of birds found only at high elevations in the Himalayas: such intriguing birds as the Great Parrotbill, the beautiful Blue Grandala, the Golden Bush Robin, the gorgeous Rosefinches, (and if he be shikari too) the Monal Pheasant, the Tragopan, the Snow Partridge, and the Snow Pigeon: and wondered whether he would ever be privileged to see them in their mountain homes? He could scarcely have hoped to see them in this part of the world, for the Nepal Government very rarely allows outsiders to travel in the Nepal Himalaya and the visitor to Katmandu is not allowed outside the valley; there is a photograph of Gosainkund lake in Landon's book on Nepal, taken by Oldfield many years ago, but I do not know of any other outsider who has ever followed the pilgrim trail. The writer was therefore very fortunate in obtaining sanction to accompany Lt. Tej Jung Thapa, an officer of the Nepal Forest Department, on a fortnight's tour in this area; the stipulation was made that I should not go within 5 or 6 miles of the sacred lake.

The tour started on the 1st September, and the area is covered by Survey of India 1" sheets 71. H and 72. E. The first three days took us from Sundari-jal to Thare Pati, a distance of about 22 miles. For the first two days the path keeps to the crest of the Gandak-Kosi watershed, rising and falling between 5,500 ft. and 8,300 ft., and runs mostly through scrub or past terraced fields of Indian corn; high forest is seen only on the summits of the peaks traversed, and consists mainly of *Quercus semecarpifolia*, with some *Q. lanuginosa*, mutilated by lopping for buffalo fodder and therefore ugly to look upon, and harbouring few birds. The Himalayan Greenfinch is commonly seen all along this section.

On the second evening we camped at a place known locally as Tarkol, but not named on the map. The camp site has, no doubt, a fine view, but the mists never revealed it to us; it swarms with leeches, and a mosquito net had to be put up to keep them off at night. From here the trail, still keeping to the watershed, rises steeply for 3,000 ft., first through oak forest, then through a dense closed canopy of *Rhododendron arboreum*, finally emerging near the top into a different world.

Nature's garden: a world of Silver Fir, of high-level Rhododendrons, of Juniper, of Berberis, and above all of flowers; a world of colour in great variety. There were the young Silver Fir cones, a dark purple-blue; a *Polygonum* (? *sphaerostachyum*) with neat cylindrical heads of numerous small flowers in a compact cluster, of a beautiful carmine-pink set off by the black anthers of the stamens; a delicate mauve *Pedicularis* growing in groups with a corolla that turns over to form an umbrella in wet weather thus protecting the long curved style and stigma; a primrose-yellow Balsam; a large pale blue *Aster* (*thompsoni*?); a beautiful *Corydalis* (*crithmifolia*?) yellow with purple tips; *Primula denticulata*, one of the loveliest flowers I have seen, rising on a 10" stalk from a rosette of leaves,

the head a cluster of blue-mauve flowers with a yellow ring at the base of the corolla and above that a purple ring, exhaling a delicate perfume; and many other flowers.

Then there were the shrubs; *Berberis vulgaris* with its coloured leaves, pink fruits, and three-pronged spines; a *Vaccinium* with light blue berries, perhaps those referred to by Shipton ('Nanda Devi', p. 220) as being considered a delicacy in Sola Kombu, though no-one seems to eat them in these parts; and finally the Rhododendrons covering the hill-sides (what a wonderful sight they must be when in flower); *R. falconeri* with its thick leaves gone rusty beneath; *R. barbatum* with its green leaves and pink bark; *R. campanulatum* with thin papery bark and leaves a delicate cinnamon colour below.

And so we came to Thare Pati, a collection of huts with stone walls and roofs of rough-hewn fir planks laid loosely on top of each other, maintained by the Government to shelter pilgrims. A more magnificent site it would be hard to conceive. Most of the huts are built on a grassy alp, sprinkled with the pink *Polygonum*, just below the crest of the ridge, at an altitude of about 12,000 ft. Facing the camp is the cirque of precipices round the headwaters of the Tadi Khola, already mentioned, terrific slopes of grass and threatening rock and foaming torrents dropping 8,000 ft. from the snow-capped heights above to the slit-like valley floor far beneath; across these precipices runs the slender thread of the pilgrim trail. From the crest of the ridge behind the camp one sees, across the valley of the Malemchi Khola running 7,000 ft. below, the ridge called Dhukpu on the map along which runs a path to the Ganja La, an 18,450 ft. pass across the Gandak-Kosi watershed; to reach this pass was our objective. Over the Dhukpu ridge appear the fine snow peaks of Jugal Himal, Gaurisanker, and others in the direction of Everest. Looking south the eye follows down the ridge by which we have come to familiar landmarks of Katmandu: Sheopuri, Nagarjun, Kakani bungalow, and the Chandragiri pass, and sweeping on over blue foothills sees the cloudless glare that marks the sweltering plains.

It was on my return that I halted here a day (13th September) to explore the last section of the pilgrim trail; I planned to reach the 15,000 ft. pass 5 or 6 miles short of the lake (beyond which point I was not allowed to explore) at 8·00 a.m., at which hour if the day were fine the view would still be unobscured by clouds. Although the route was there in front of me, I under-estimated by 2½ hours the time it would take to reach the pass, so deceptive is the scale of these mountains.

After an early breakfast I set out at 2·30 a.m. with my Gurkha orderly; the stars were shining, giving false promise of fair weather, and in the absence of a moon we could proceed but slowly over the rough track by feeble lantern light; we crossed a spur at 5·00 a. m. and rested for 10 minutes, after which the track being visible by the light of dawn we hid the lantern under a convenient boulder. Dawn broke grey and cheerless with the pass and the higher peaks before us swathed in mist, and a cold drizzle started soon after 6·00 a.m. to continue without respite through the day.

By 7·00 a.m. we had reached the small bridge (three fir poles lashed side by side) crossing a side torrent that marks the end of the traverse and the start of the climb to the pass; for all the terrifying

aspect of the traverse as seen from a distance, the path has been so aligned that nowhere does one have to look down dizzy heights, though the towering cliffs above are often an imposing sight. *Primula denticulata* grows abundantly beside the path, being a lover of moist localities; above the bridge a Brown Dipper and a Little Forktail were working their way upstream, while a pair of White-capped Redstarts bobbed and fussed about the nearby rocks. The bridge itself is lower than Thare Pati, and the pass would appear from the contours on the map to lie at 15,000 ft. so the final climb must be more than 3,000 ft. The path leads up through a rocky terrain in its lower levels completely carpeted with a yellow *Potentilla*, now mostly bearing fruit like small black berries but assuredly a fine sight in full bloom; here and there a short-stalked pale blue Gentian grew; and at one place from the rocks above came the shrill whistles of a covey of Snow Partridges.

At 9·00 a.m. we reached the top, unexpectedly ornamented with a vast pile of walking sticks heaped up here by the pilgrims a month ago; one can picture the relief and joy with which they attain this point, with nothing but a gentle descent of 5 or 6 miles between them and their goal, after the considerable hardships they must endure, ill-clad and ill-provided for mountain travel as they are, from the persistent driving rain and the cold and rarefied air of this elevation.

Crouching in the lee of a large boulder we ate and rested for half-an hour, looking down on the little lonely mountain tarn of Surja Kund, or as much of it as we could see in the driving mist. As visibility never increased beyond 200 yards and there was no hope of the weather improving we reluctantly began the descent at 9·45. I was wearing locally-made rope-soled shoes, which proved about as tough as wet blotting paper on that path of granite chips and boulders, so that the return walk of 6 hours back to camp was done mainly on the bare soles of my feet. I spent some minutes observing a marmot at the mouth of its burrow; it appeared to lack a tail, but otherwise in size and appearance was something between a large rat and a small rabbit; the front part was reddish, and the back and rump blackish-brown. These animals are common at this level, and we often saw them vanishing into holes in the ground.

We had intended to halt a day on the 4th to do the above trip, but the weather being unfavourable we decided to postpone the attempt until our return, arguing that the weather could not be worse (it was), and accordingly moved camp to Malemchigaon, a Sherpa village perched on a shelf of the hillside 4,000 ft. below. It had rained hard early in the night, and dawn disclosed heavy rain clouds blowing up from the south. We left at 7·15 and dropped steeply down, first through Juniper, Silver Fir and Rhododendron scrub, and then lower down through Silver Fir high forest with Rhododendron undergrowth. Brandis ('Indian Trees' p. 692) states that he has never seen *Abies pindrow* and *Abies webbiana* growing together, so it was of interest to see them growing here side by side; some of the trees were fine specimens and had attained 18 ft. in girth.

The Chini Lama of Boddnath (a famous Buddhist shrine near Katmandu) spends the summer in Malemchigaon, where he maintains a monastery. He is an interesting character and speaks many

languages, including English, Nepali, Sherpa, Hindustani, and several Tibetan and Chinese dialects; he belongs to the red-hat sect of Tibetan lamas, which permits marriage, and once went on pilgrimage to Shigatse but was prevented by illness from going on to Lhasa as he had hoped to do. He invited us into his house, and we mounted to an upstairs room floored and roofed with short wide rough-hewn planks of Silver Fir, and ornamented chiefly with brass and iron cooking pots of various dimensions. A fire was burning in the back centre of the room, and over the hearth was suspended a platform on which numerous large packets of goats' meat, neatly done up, were being smoked. His kindly wife brewed us some Tibetan tea, complete with tsampa, which we found a pleasant warming drink; we drank countless cups while talking to the lama, who drank his tea from a beautiful jade cup in a silver and gold mounting.

In the evening he arranged a village dance, in which half a dozen men and as many women performed; the dance consisted in tapping or stamping the feet while singing (I found it an excellent method of warming the feet, which was perhaps how it originated!). At first the performers were shy, but warmed up after several rounds of rice spirit had been served in bright brass bowls, and the singing was robust and melodious, with an attractive rhythm. At intervals a villager would come before the lama and receive a benedictory pat on his bared head.

The Sherpas of these parts are of Tibetan appearance, and some of the women have fair complexions with pink cheeks. They keep buffaloes, chumries (a cross between a cow and a yak), sheep and goats, and for their staple food grow potatoes and Indian corn in terraced fields. The herdsmen live a semi-nomadic life, constructing temporary huts with stone walls roofed over with long rolls of bamboo matting, and moving their animals from time to time according to the dictates of the grazing or the season. The men are powerfully built and wear long tight trousers like the Nepalese, and rough weather-proof homespun woollen jackets with or without short sleeves. The women dress much like the Nepalese and wear ornaments of coral, turquoise, gold, silver, and onyx, this last apparently the stone most highly prized in Tibet. At times the men indulge too freely in rice spirit and fights ensue, sometimes with fatal results; one elderly whiskered gentleman wno accompanied us to the Ganja La as a shikari was ' wanted ' for three murders, and I was told of a wealthy young man who wished to do away with a rival in another village and successfully liquidated him by means of hired assassins. The Sherpas seem to smoke mainly cigarettes, which they pass from hand to hand, or occasionally a hookah, in contrast to the pipe-smoking hill tribes of Burma. The odour of rancid butter is all-pervading, emanating most strongly from the women, who do most of the butter-making, and noticeable in all the houses. Wood carving is a hobby with the Sherpas, as with the Nepalese, and is the chief interior ornament of their houses. The work is well done, and the chief themes are: a conch shell; an elephant; and what appears to be a dragon surrounded by leaves, but is meant to represent lightning and thunder in the clouds.

Early next morning the lama showed me round his monastery, a stone building with wooden floors and roof of about the same size

as his house; prayer flags flutter outside, and on the left of the entrance porch is a large prayer-wheel. The interior consists of one room containing images representing five manifestations of the Buddha, one of them identical with the seated Buddha to be seen all over Burma, and elaborate mural paintings, executed by an artist from Lhasa in 1935; the paintings represent Buddhas and their disciples, and took three months to complete, the fee charged being Rs. 2 per day plus free board and lodging. The lama explained the significance of the various images and paintings, but I was not sufficiently *au fait* with Tibetan Buddhism to follow all he said. The room also contained a conch shell, blown at times of worship, a large drum, butter lamps, offerings of barley and maize, a pair of millstones, and several pieces of cloth; these last are apparently offered by the bereaved on the death of a near relation, whose name is written on a piece of white cloth at the top.

We left at 9·00 a.m., descending over 2,000 ft. to the Malemchi Khola, a roaring torrent fortunately bridged, and climbed the same height up the far side along a leech-infested path through terraced fields. At 2·30 p.m. we reached Tarke Gyang, a larger and more prosperous village, the houses crowded together on a shelf of the steep hillside. While the tents were being put up we looked at the local monastery (apparently every village has its own lama and monastery). The chief feature was an enormous prayer wheel, about 10 ft. in height by 20 ft. in circumference, which is turned by hand and rings a gong at each revolution to mark the mounting toll of merit. The monastery was two-storied with mural paintings, old and rather tarnished, on both stories; some beautiful paintings on cloth, the work of a local artist, were hanging in the upper room.

No white face had ever appeared in these Sherpa villages before, and that evening my tent was besieged by curious villagers, mainly women and children, while my servant's cooking operations on a Primus stove proved an attractive side-show; only when darkness fell were we left in peace.

The coolies had to prepare rations (mostly Indian corn crushed and roasted, in which form it can be eaten without further cooking) for the next few days, and this delayed our start the following morning till just before mid-day. The first two hours of the march were up a vile and slippery track, crawling with leeches but brightened by a variety of fine balsams, pure yellow, deep purple, white, and pink, that flourish in wet forest; it took us up 3,000 ft. to a hut on the shoulder of Yangri (12,443 ft.) and was a short-cut, the main path reaching the hut by a more roundabout route. We continued on up the ridge for some distance and pitched camp at an altitude of about 12,000 ft. I was surprised to find the leeches troublesome even at this height, and put up the mosquito net to keep them off at night. After sunset the mists cleared for a few moments to show the snows of Jugal Himal in the north-east, but the weather made up for this momentary weakness by its ferocity on the following day.

Dawn revealed an overcast sky and heavy clouds rolling up from the south, and as we started at 7.40 a.m. the rain commenced; we climbed steadily in the drizzle, the track at first following the crest of the ridge and then traversing well below it on the east side. At 11.40 a.m. we had lunch in the shelter of an overhanging boulder,

and thereafter the weather became worse, a strong wind driving sheets of rain across the ridge from east to west. The coolies had no clothes warmer than those they wear in Katmandu, and their cheerful endurance of the unpleasant conditions was remarkable; the camping ground was eventually reached at 4·30 p.m. and it was dark before we settled in, it being necessary to send back two of the Sherpas to carry the loads of coolies who had become exhausted. Rain and mist interfere seriously with bird observation, but they do not obliterate the flowers, and of the sights seen this day a pink *Vaccinium* that covers patches of hillside and resembles heather at a distance, and a deep blue Gentian or Campanula scattered profusely on a hillside of Potentilla leaves were the most memorable. At dusk the mists cleared a little to reveal a hanging glacier across the valley high above the camp.

The camp was pitched on easy grassy slopes sprinkled with yellow flowers below a small hill with a cairn on its summit, at an elevation of perhaps 15,000 ft. Our plan was to halt two days and to go up to the Ganja La on whichever day might be the finer; as it turned out both days were equally wet, but the first day being unpromising Lt. Tej Jung went out after Tahr and I pottered round the camp in search of birds. We were above the Juniper zone and the only shrubs that grew were two species of dwarf Rhododendron: *R. lepidotum* which covers large areas of hillside and gives out a delicious fragrance underfoot; and *R. setosum*, of more resinous scent, growing in mixture with the former; both species ascend to about 16,000 ft. Near the camp I saw a butterfly of the genus *Parnassius* (Snow-Apollo), the only interesting butterfly seen on the trip. I climbed up towards the crest of the ridge, and saw a small flock of Snow Pigeons; higher up a brace of cock Monal Pheasants, which got up out of a patch of boulder scree scarcely 10 yards from me and flew protesting down the hill, afforded a magnificent sight with their metallic purple plumage, white rumps, and cinnamon tails.

The rain continued all night and well into the next morning; however we left for the pass at 9·00 a.m. and the rain stopped for two hours, which enabled me to observe a flock of Hodgson's Grandalas, those beautiful blue birds I had hoped to see up here; we also saw a dozen or more Monal Pheasants and a covey of Snow Partridges, and I watched a Nepal Wren hopping in and out of the rocks in a patch of scree. After going about 2 miles from camp we rounded the base of a cliff and topping a small rise looked down into a wide flat valley. This would be the best camp site, sheltered to some extent from the wind and lying close up to the backbone of the ridge, for exploring the surrounding mountains, but firewood would have to be brought up from below. A Brown Dipper was observed on the stream. Crossing to the upper end we entered a side valley, the entrance being marked by a rock the size of a large house, and started climbing in earnest; passing a prominent concave stone shute on our right we eventually reached the crest of a spur near a small but massive hanging glacier; crossing some snow-covered rocks and then half a mile of snow-field in a soggy melting condition and of a nasty bluish tinge like föhn snow in the Alps, we reached the foot of a steep but easy scramble of about 200 ft. that took us to the top of the pass (18,450 ft.). The path is not well marked in several

places and the pass would not be easy to find without a guide. At this height the rain had changed to sleet, and visibility was limited to about half a mile.

Descending a few steps on the far side we sat down out of the wind for a rest. The path dropped down the rocks below us for 100 ft. and then crossed a small glacier to a scree-strewn valley, bearing north-east from where we sat, which disappeared from sight round a spur. East and west the ridge rose steeply in shattered cliffs and an attempt to advance far in either direction would have involved difficult rock climbing. From the pass itself the view is very restricted by neighbouring spurs, and the fine snow pyramid of Langtang Lirung (23,771 ft.) which lies about 10 miles to the north-west, is probably not visible. The path leads down to the Langtang Khola (a tributary of the Gandak) and across the valley is the Tibet border, the nearest point being about 7 miles in an air line, but there is no pass across the main range in this area. The Ganja La is a little used pass, and is open only for two or three months in the year. We started down at 2·45 and reached camp three hours later.

We marched back the next day; I halted at the foot of peak 14,934 ft., in the fond hope of obtaining a view from the summit either that evening or early the following morning, while Lt. Tej Jung carried on to Tarke Gyang, his coolies having run out of food. Golden Bush Robins were commonly seen this day.

The following morning I left camp at 6·25 a.m. and reached the top of the peak at 7·25. The sun was actually shining and Gaurisankar and other snow peaks to the east were clear, but the nearby ones were veiled in cloud. It was very pleasant sitting up there, at the height of the summit of the Matterhorn, until the mists, rising all too quickly from the valleys, blotted out the view. Looking north the eye followed the Dhukpu ridge to its junction with the Gandak-Kosi watershed, but the Ganja La itself was not visible; to the left one looked down immense depths to the Malemchi Khola. 7,000 ft. below, while in the foreground a jade green tarn nestled on the shoulder of a mountain. Looking south one saw, far below, the little cluster of huts on the green hillside that was Malemchigaon, which we reached the same evening. We stopped at Tarke Gyang on the way down; Lt. Tej Jung had arrived the previous evening, and we now parted company, he to return to the Ganja La and over it into the Langtang Khola (where he shot a Tahr) and I, unwillingly, to Katmandu, my leave being nearly up. I arrived back on the 15th September, and my only regret was that I had been unable to devote two months, instead of two weeks, to the mountains of the Gandak-Kosi watershed.

NOTES ON BIRDS SEEN

The names and serial numbers are taken from *The Fauna of British India —Birds*, 2nd edition, by Stuart Baker. For want of suitable ammunition no specimens were collected. The mountains of the Gandak-Kosi watershed are the nearest high mountains to Katmandu, and it is probable that many of Hodgson's type specimens of mountain birds came from this locality.

8. **Corvus macrorhynchos.** Jungle Crow.

Seen round villages and huts up to 14,000 ft.

22. **Urocissa flavirostris.** Yellow-billed Blue Magpie.
Seen above Tarkol at about 8,500 ft., but not higher.

46. **Nucifraga caryocatactes.** Himalayan Nutcracker.
Several pairs seen round Thare Pati on hillsides covered with Silver Fir—Rhododendron scrub. The white outer tail feathers and the loud harsh call-note are distinctive features.

48. **Pyrrhocorax pyrrhocorax.** Red-billed Chough.
Several pairs seen round our top camp below the Ganja La at 15,000 ft. The call-note is high-pitched.

65. **Lophophanes rubidiventris.** Rufous-bellied Crested Tit.
One of the most characteristic birds of the Rhododendron scrub zone at 11,000—13,000 ft. The birds of which I had a good view appeared to have rufous on the centre and sides of the breast and an ashy patch in between.

68. **Lophophanes dichrous.** Brown Crested Tit.
A small mixed party of this and the preceding species was noted at 11,500 ft. below Thare Pati in open tree and rhododendron forest. Grey above, tawny below, with an interrupted buff collar on the hind neck and a full crest. I thought at first it was a *Yuhina* or *Ixulus*, to which genera it has a curious resemblance.

70. **Sylviparus modestus.** Yellow-browed Tit.
Not uncommon in scrub up to 14,000 ft. and makes its presence known by a curious grating *churr*; in habits it is shy and rather a skulker, spending much time concealed in dense bushes.

89. **Conostoma aemodium.** Great Parrotbill.
I had an excellent view of a pair of these birds in a bush at 11,000 ft. near Thare Pati, and watched them for some minutes preening each others feathers. The orange bill, whitish forehead, dark lores, and mouse brown plumage are diagnostic; except for the bill it resembles a large Laughing-Thrush.

148. **Trochalopteron erythrocephalum.** Red-headed Laughing-Thrush.
One of the commonest birds up to the upper level of oak forest (say 9,000 ft.) but not seen at higher elevations.

161. **Trochalopteron affine.** Black-faced Laughing-Thrush.
Common round Thare Pati and along the pilgrim trail thence to Gosainkund, in rhododendrons at 11,000—13,000 ft. It has a melodious call-note *to-we, to-we-you*, and harsh churring alarm-notes. Contrary to the statement in the Fauna, I saw it always in parties, not pairs.

171. **Trochalopteron lineatum.** Streaked Laughing-Thrush.
Seen round Malemchigaon and Tarke Gyang villages (both 8,000 ft.); it appears to like being near houses and one bird had its abode close to Malemchigaon monastery.

304. **Fulvetta vinipecta.** Hodgson's Fulvetta.
Fairly common in parties in rhododendron and Juniper scrub at 11,000–12,000 ft. A very active tit-like bird, constantly uttering a high-pitched *chip, chip* call-note that indicates the presence of a party. A broad white eyebrow starting from above the eye, brown crown, ear coverts and patch over the eye white chin and throat, and earlier primaries edged with bluish-grey, are noticeable field characters.

326. **Ixops nipalensis.** Hoary Barwing.
Common in the upper oak forests at 7,000—9,000 ft., but not seen above; possibly it goes higher when the rhododendrons are in flower.

333. **Siva strigula.** Stripe-throated Siva.

Common in parties in rhododendron scrub at 10,000—11,000 ft. and also seen lower down in oak forests at 7,000 ft.

448. **Certhia familiaris.** Nepal Tree-creeper.

Several birds were seen in a patch of open forest just below Thare Pati at 11,500 ft. The birds hunted over mossy boulders as well as tree-trunks.

458. **Troglodytes troglodytes.** Nepal Wren.

Seen both in rhododendron-juniper scrub and on bare boulder-strewn hillsides up to 16,000 ft. The habits are well described in the Fauna.

479. **Cinclus pallasii.** Brown Dipper.

Seen on the Ripar Khola at 15,000 ft., on the way to the Ganja La, and also at 12,000 ft. on rocky streams below the pilgrim trail.

502. **Rhodophila ferrea.** Dark Grey Bush Chat.

Seen amongst berberis-juniper scrub at 11,000 ft.

525. **Microcichla scouleri.** Little Forktail.

One bird seen at 12,000 ft. where the pilgrim trail crosses the Tadi Khola.

534. **Chaimarrhornis leucocephala.** White-capped Redstart.

A common and characteristic bird of streams and mountain tarns up to 15,000 ft. two or three birds commonly being seen together.

535. **Rhyacornis fuliginosa.** Plumbeous Redstart.

One bird seen at 8,000 ft. near Malemchigaon.

541. **Grandala coelicolor.** Hodgson's Grandala.

A small party seen at about 15,000 ft. on the way to the Gunja La.

546. **Tarsiger chrysaeus.** Golden Bush Robin.

One of the commonest and most characteristic birds above the tree-line ; it is usually seen about patches of juniper, berberis, or rhododendron scrub, but is frequent in the higher dwarf rhododendron zone. Far from being 'a quiet, retiring little bird' (vide Fauna), I found it bold and conspicuous. As male, female and young have different plumages the bird appears in various guises that are puzzling at first; the tail is the best key to identity.

599. **Oreocincla dixoni.** Long-tailed Mountain Thrush.

An astonishingly tame bird frequented a Bhuddist stone shrine on the ridge about a mile short of Thare Pati at 11,500 ft. It walked about on the ground and allowed one to approach almost within touching distance before flying off a short way. I noted that the primary coverts were tipped with fulvous, which identifies this bird as *dixoni* and not *mollissima* (vide Fauna, 1st edition).

605. **Monticola erythrogastra.** Chestnut-bellied Rock Thrush.

A pair seen at 11,000 ft. just below the shrine mentioned above. The male sat calling for some time on the topmost shoot of a Silver Fir; the white neck patch and black barring on the under-parts of the female were noticeable.

620. **Laiscopus collaris.** Eastern Alpine Hedge-Sparrow.

Seen round our top camp at 15,000 ft. on the way to the Ganja La.

(628. **Prunella rubeculoides.** Robin Hedge-Sparrow.

I thought I saw this bird also at the top camp, but am not sure of the identification.)

(A Bush Warbler or Willow Warbler, dark brown in colour with a pale supercilium, uttering a treble call-note, is common in scrub to 14,000 ft.)

Phylloscopus pulcher. Nepal Orange-barred Willow-Warbler.
Not uncommon in rhododendron scrub at 10,000—12,000 ft.

Phylloscopus sp. One species with greenish upper-parts, a supercilium, and a single wing-bar is very common in the area, and its call-note of two notes repeated half-a-dozen times is commonly heard.

1041. **Perissospiza carneipes.** White-winged Grosbeak.
Several pairs seen round Thare Pati. The Fauna description of it as a noisy restless bird with a rasping call-note is apt.

1047. **Pyrrhula nipalensis.** Brown Bullfinch.
Two pairs seen: one in Sheopuri forest at 7,000 ft., the other along the pilgrim trail at 8,000 ft. A restless bird with an arresting melodious call-note. The general brown colour with purple-black primaries and tail, and dark brown round the eye and bill are diagonistic.

1052. **Propyrrhula subhimachala.** Red-headed Rosefinch.
I twice saw females at 11,000 ft. in rhododendron scrub, but no males.

1053. **Pyrrhospiza punicea.** Red-breasted Rosefinch.
A male seen at 12,000 ft. in rhododendron-juniper scrub by the pilgrim trail.

1055. **Propasser thura.** Nepal White-browed Rosefinch.
Not uncommon in rhododendron-juniper scrub and seen up to 13,500 ft. The white end to the broad pink supercilium is diagnostic in the male.

1059. **Propasser pulcherrimus.** Beautiful Rosefinch.
Also fairly common to 13,000 ft. One noisy party, uttering harsh bleating notes in rhododendron bushes, seemed to consist entirely of males.

1089. **Hypacanthis spinoides.** Himalayan Greenfinch.
The most markedly characteristic bird of the pilgrim trail from Sheopuri to Thare Pati, seen both in open country and in forest clearings. A noisy obtrusive bird with handsome black and yellow plumage; one of its notes is strongly reminiscent of the call-note of the Iora, *weeeeeee-tu*, dropping in pitch at the end.

1142? House Martins, which I identified as *cashmeriensis*, were seen hawking insects at 7,000 ft. over the pilgrim trail.

1186. **Anthus hodgsoni.** Indian Tree Pipit.
Common in parties above the tree line at 12,000—15,000 ft.

1579. **Upupa epops.** Hoopoe.
Pairs seen in open country, usually near tarns or camp sites (especially where short green grass is found), at 12,000—15,000 ft.

1609. **Collocalia brevirostris.** Himalayan Swiftlet.
Parties seen on the wing over the pilgrim trail at 8,000 ft. The rump was noticeably paler than the wings and tail.

1624. **Caprimulgus macrourus.** Nepal Long-tailed Nightjar.
I put up a nightjar, light brown in colour and showing little white on wings or tail, at Thare Pati, 12,000 ft., that I believe to have been a female of this species. It seemed altogether too light for *C. indicus*, which I would have expected at this altitude.

1716. **Gypaëtus barabtus.** Lämmergeier.
One bird seen over the pilgrim trail at 7,000 ft.

1858. **Columba leuconota.** White-bellied or Snow Pigeon.

A small flock seen several times round our highest camp at 15,000 ft.

1928. **Lophophorus impejanus.** Monal Pheasant.

Common from 11,000 to 15,000 ft. both along the pilgrim trail and along the track to the Gunja La. Cocks and hens were always separate, usually in parties of 3 to 6 birds. A young female shot had yellow soles to the feet, whereas in the adult they were greenish-brown. In flight the female appears brown with much white on the tail.

1993. **Lerwa lerwa.** Snow Partridge.

Coveys seen at 16,000 ft. on the track to the Ganja La, and at 12,000 ft. above the pilgrim trail. Red bill and legs, chestnut breast, and closely barred black and buff upper-parts are diagnostic; the white bars near the tips of the inner secondaries show up in flight. Birds utter shrill whistles when alarmed.

THE STORM-PETRELS OCCURRING IN THE NORTHERN INDIAN OCEAN, AND ADJACENT SEAS.

By

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(*With a plate*)

Four species of storm petrel have been recorded at different times from the north portion of the Indian Ocean and its adjacent seas.[1] They are,

Wilson's Storm-Petrel, *Oceanites oceanicus* (Kuhl)
Black-bellied Storm-Petrel, *Fregetta tropica* (Gould)
British Storm-Petrel, *Hydrobates pelagicus* (Linn.)
Swinhoe's Storm-Petrel, *Oceanodroma monorhis* (Swinhoe)

The most plentiful and interesting of these is Wilson's Storm-Petrel, which occurs as a regular winter visitor from June to October. The other three would appear to be only very rare vagrants, and in the case of one at least the identification may be erroneous.

In the following notes an attempt is made to summarise what is known of the occurrence of these birds in our area, with the inclusion of some unpublished data. It must be stressed that records are still meagre, and further information, supported if possible by skins, would be welcome. For this reason a brief statement of the essential characteristics of each species, as seen on the wing, has been added at the end of the section dealing with it.

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[1] I have decided, after careful consideration, not to include in this paper the records of W. W. A. Phillips (*Journal B.N.H.S.*, Vol. 46 pt. 4, pp. 593–613).